



Fare Collection: Lines 5 and 6 Readiness

Date: November 29, 2021
To: TTC Board
From: Chief Strategy and Customer Officer (Acting)

Summary

As the commissioning of the Eglinton Crosstown (Line 5) and the Finch West LRT (Line 6) is approaching, the TTC and its partner Metrolinx are working to ensure a seamless transition between the agency responsible for project delivery and the agency responsible for the day-to-day operations. When Lines 5 and 6 are opened they will introduce off-board fare payment to the TTC. This will mean that customers will pay their fares before boarding the LRT vehicles to begin their trip.

To allow for customers to have full ability to access and pay fares on Lines 5 and 6, the TTC has identified some improvements in the proposed fare collection model. This report provides an overview of these improvements, which includes the installation of up to 200 fare gates on Lines 5 and 6.

This report seeks to obtain authorization for the expenditure of funds for the purchase of maintenance and services that will align with existing contract length for up to 200 fare gates for the Lines 5 and 6, as well as future expansions. In addition, this report seeks to obtain authorization for the implementation of Service Cards for use by TTC personnel for system access.

This report will also provide an overview of the need for Fare Vending Machines (FVMs) at above-ground stops on both Lines 5 and 6.

Recommendations

It is recommended that the TTC Board:

1. Authorize a contract amendment to the Scheidt & Bachmann GmbH "Contract C27PT15868 – Supply, Installation and Maintenance of fare gates for PRESTO" to increase the upset limit amount by \$6.18 million (from \$92,518,992.09 to \$98,703,880.40 in Canadian funds, inclusive of all taxes).

Financial Summary

The additional fare gates will be phased into service between 2022 and 2025 as required. The requested approval for increased spending authority of \$6.18 million is based on existing contract pricing and is inclusive of all taxes as per Table 1 below. Required ongoing maintenance services will be funded through the Operating Budget, with initial outlays for network charges and Service Cards funded from TTC's Capital Budget and Plan.

Table 1

	2022	2023	2024	2025	Total
Operating – Maintenance	900,354	1,164,886	1,268,573	1,370,909	4,704,723
Capital – Network Charges and Service Cards	864,960				864,960
Rebateable HST	194,990	128,669	140,122	151,425	615,205
Total	1,960,304	1,293,555	1,408,695	1,522,334	6,184,888

These operating costs have been included in cost estimates to operate the Eglinton and Finch West LRTs and will be included in Operating Budgets for 2022 to 2025.

For the network charges and service cards associated with fare gates, sufficient funds are included in 2021-2030 Capital Budget and Plan as approved by the TTC Board on December 21, 2020 and City Council on February 18, 2021.

It should be noted that with the existing contract value and this amendment, the contract value includes costs of: initial fare gate implementation, the continued improvement and expansion of the system through ongoing capital projects and ongoing maintenance services.

The Interim Chief Financial Officer has reviewed this report and agrees with the financial impact information.

Equity/Accessibility Matters

A cornerstone of the TTC'S Corporate Plan is accessibility. As a proud leader in providing accessible public transit in the City of Toronto, we are committed to ensuring reliable, safe and inclusive transit services for all of our customers. ACAT members have reviewed the new fare gates and provided feedback.

The TTC will maintain consistency in fare collection with the existing TTC network with the installation of fare gates on Lines 5 and 6, which will make it easier for customers to understand and navigate the system. The new fare line configurations at the Line 5 and

6 stations will also include fully accessible aisles at all station entrances, which is consistent with the current fare line configurations at existing TTC subway stations. The new fare gates will improve the customer experience and provide increased accessibility for all customers, including those with mobility aids, small children and strollers, bikes, etc.

In addition to fare gates, installing full service FVMs at above-ground stops on Lines 5 and 6 will also increase customer access to purchase PRESTO fares. This includes the ability of customers to load and purchase PRESTO cards and PRESTO Tickets with cash. FVMs will also enable TTC ticket validators to be installed to accept legacy tickets.

Decision History

At its meeting on May 1, 2012 the TTC Board:

- Reaffirmed the framework and general principles for implementing the PRESTO fare collection system on TTC premises (including vehicles, as applicable) that were approved by the Commission on November 23, 2011;
- Delegated authority to the Chief Executive Officer to continue to negotiate with Metrolinx and execute any and all necessary agreements with Metrolinx related to the design, implementation and operation of the PRESTO Services.

[Framework for Agreement between TTC and Metrolinx/Presto](#)

At its meeting in December 2012, the TTC entered into the Master E-Fare Collection Outsourcing Agreement (the Agreement), dated November 28, 2012 with Metrolinx to implement the PRESTO farecard system at the TTC. The Agreement included provisions for Metrolinx to design, procure, build, install, operate, service and maintain the PRESTO farecard system consistent with the agreed upon TTC business and performance requirements. It was set out that Metrolinx would retain 5.25% of revenue collected by the PRESTO system. The TTC's scope of work within the Agreement includes supporting Metrolinx with the overall project management and oversight to ensure the PRESTO fare card system fully meets TTC's business requirements.

[Presto December 19, 2012](#)

At its meeting on August 19, 2014, the TTC Board received a status update on the implementation of PRESTO at the TTC. The presentation included a new plan for fare lines that would include both fare gates and integrated turnstiles. The presentation identified that 60 fare gates were to be acquired from Metrolinx through a special arrangement between the TTC and Metrolinx.

[PRESTO Implementation at the TTC Status Update](#)

In January 2015, Metrolinx awarded contracts to Scheidt & Bachmann (S&B) for the design, development, installation and maintenance of three categories of Electronic Fare Management devices. In the same month, the TTC and Metrolinx jointly developed

a PRESTO implementation program that includes: all legacy streetcars by end of 2015; all TTC stations and transit modes to be PRESTO-enabled by the end of 2016.

At its meeting on June 22, 2015, the TTC Board received a PRESTO implementation update. The report also discussed changes to station operations that would be supported by installation of fare gates.

[TTC PRESTO Implementation June 2015 FINAL v2 0](#)

At its meeting on July 29, 2015, the TTC Board approved a contract up to a maximum value of \$17.1 million for the purchase of up to 450 fare gates from Scheidt & Bachmann GmbH, including associated implementation work and one year of maintenance support. The Board also authorized staff to negotiate and execute an acceptable agreement with Scheidt & Bachmann (based on the terms of the Metrolinx Master Agreement) and conditions acceptable to the TTC's General Counsel.

[PA-Faregates for PRESTO](#)

At its meeting on May 31, 2016, the TTC Board approved a contract amendment to a maximum value of \$20.6 million for the purchase of up to an additional 600 fare gates from Scheidt & Bachmann GmbH (S&B), including associated implementation work and maintenance.

[Procurement Authorization Fare gates PRESTO FINAL](#)

At its meeting on June 12, 2018, the TTC Board approved a contract amendment to a maximum value of \$59.9 million for the purchase of an additional nine years of maintenance service for fare gates and fare gate implementation services.

[Supply, Installation, and Maintenance of Fare Gates for PRESTO – Contract Amendment](#)

Issue Background

As the Operator of Lines 5 and 6, the TTC must ensure Metrolinx delivers a complete fare collection system on these corridors that maintains the existing customer experience and maximizes revenue.

In 2016, the Province of Ontario and the City of Toronto signed the Agreement in Principle (AIP), which secured capital and lifecycle maintenance funding from the Province, with the City of Toronto taking responsibility for operations and non-lifecycle maintenance funding. The AIP also specified that the City of Toronto and the TTC would receive 100% of the fare and non-fare revenue to assist in offsetting operations and maintenance costs.

As Line 5 is part of the TTC network and as the Operator, the TTC is responsible for revenue collection in accordance with the signed AIP, and must ensure Metrolinx meets the requirements for providing customers with the full ability to pay their fares at all

stations and stops. It was also agreed that Metrolinx and the TTC would share the same objectives of delivering a safe, effective and integrated transit services, and that Metrolinx projects will be operated to provide seamless TTC customer experience. This also applies to Line,6 which is currently still under construction. As a result, TTC staff continue to work with Metrolinx to ensure the following key objectives are achieved for current and future expansion projects:

- Provide the same fare collection experience as the remaining TTC network to maintain consistency in customer experience;
- Ensuring TTC revenue is protected, while increasing customer access to fares by installing appropriate fare equipment (e.g. fare gates and FVMs); and
- Ensuring equity and access to fare payment is maintained.

Comments

To facilitate a seamless fare collection experience on Line 5, the TTC agreed to provide Metrolinx with funding for 112 fare gates at the 12 underground stations.

In 2019, TTC staff initiated conversations with Metrolinx/PRESTO staff to adhere to the TTC's original operational requirements, which included fare gates at 12 underground stations. Metrolinx agreed to assist the TTC with procuring, installing and commissioning the fare gates, however, there was insufficient funding in the Project to accommodate this expense.

The TTC's position has always been to have fare gates at all underground stations on Line 5 to ensure safety, security and protection of fare revenue. The installation of fare gates will provide a consistent customer experience and fare barrier to protect revenues, which is aligned with the TTC's current subway model. Therefore, on June 23, 2020, the TTC committed to providing Metrolinx with funding for all the 112 fare gates required at the 12 underground stations.

In 2014 and 2015, the Board has previously approved the purchase of fare gates noting a number of benefits from implementing fare gates system-wide, including:

1. Harmonizing fare line equipment by replacing a variety of existing fare line equipment with a single, access control solution that provides a consistent customer experience;
2. Improving accessibility by providing an accessible aisle at all station entrances, and a second accessible gate at most stations; and
3. Improved fare line performance through increases in aisle width and the number of aisles, and the ability to configure the gates for entry/exit, entry only, or exit only operation to meet local customer demands.

TTC will continue to maintain its relationship with S&B to provide support for its fare gates.

Under the existing agreement, S&B is responsible for the supply and installation of the fare gates, as well as providing training, remote monitoring systems, back end support, and maintenance services. This would include:

1. Provision of spare parts and repairs of defective parts;
2. Operation of a service desk to handle TTC calls, assess problems, and dispatch technicians;
3. On-site maintenance visits to address issues that TTC personnel are unable to resolve (i.e. second line maintenance activities);
4. Lifecycle maintenance of the fare gates and its components to enhance reliability of the fare gates; and
5. Provision, operation and maintenance of separate backend environments to support station operations and ongoing testing and training needs. This includes the required networking and communications for these environments.

The S&B costs for the ongoing operation and maintenance of the fare gates is on average \$6.9 million per year at full implementation, with approximately \$440.00 per month for each fare gate. This is equal to the maintenance costs for each fare gate plus the annual increase for an estimated 2% Consumer Price Index (CPI) adjustment and the additional costs for the backend environments and associated networking and communications. The reliability of fare gates has improved to greater than 99.5% availability since the rollout commenced, and additional software updates are continually implemented to improve fare gate reliability and availability to the customer. The additional backend environments also provide a critical resource to test and validate future fare gate updates.

With the opening of Line 5, the TTC has identified some additional improvements in the proposed fare collection model to maintain the existing customer experience and maximize revenue.

The proposed fare collection model on Lines 5 and 6 at above-ground stops is designed for off-board payment which requires all fare payments to occur prior to boarding, and there is no ability to pay once on the vehicle. This is different from our existing fare collection system on the rapid transit network, and modifications are needed to remain consistent with the current experience while also maximizing revenue.

The current model includes installation of:

- Single Ride Vending Machines (SRVMs) which provides proof of payment for customers paying with legacy tokens and exact cash fares; and
- Self Serve Reload Machines (SSRMs) that allow customers to load their PRESTO card with only debit or credit.

The SRVMs and SSRMs do not allow customers to purchase PRESTO cards or PRESTO Tickets and do not validate legacy tickets, which poses difficulties for customers who are not able to purchase or validate fares through a SRVM or SSRM. This may result in some customers being unable to pay their fare which could result in potential revenue loss. This does not meet the TTC's requirements that the customer fare payment experience on these lines matches that of the rest of the TTC system.

Metrolinx and the TTC are negotiating to install full-service FVMs at all above-ground stops on Lines 5 and 6, to enable better customer access to PRESTO and maintain consistency across the entire TTC system.

Installing full service FVMs at all above ground stops will increase customer access to PRESTO fares particularly in the eastern portion of Line 5 where the surrounding areas do not allow for customers to access a retailer to purchase fares. The installation of the FVMs will maintain the existing customer experience to ensure customers have access to fares and provides more flexibility than the current proposed model. Additional benefits of installing FVMs include:

- Increased customer access to purchase a PRESTO card and PRESTO Tickets, which includes the two-hour transfer. PRESTO Tickets are currently only available for purchase through FVMs at TTC subway stations and this change will make access to PRESTO Tickets consistently available at all stations on the TTC's rapid transit network;
- Maintains equity by providing greater flexibility for cash paying customers to purchase fares and load their PRESTO card;
- Enabling ticket validators to be installed that accept TTC legacy tickets; and
- A consistent fare collection experience, making TTC services easy to understand and use.

Since the FVMs for the above-ground stops are not part of the original contract for Lines 5 and 6, the TTC is negotiating with Metrolinx on a one-time capital contribution that falls within the signing authority for the TTC CEO to award. We continue to collaborate with Metrolinx to ensure FVMs can be installed in time for the Line 5 opening.

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Signature

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